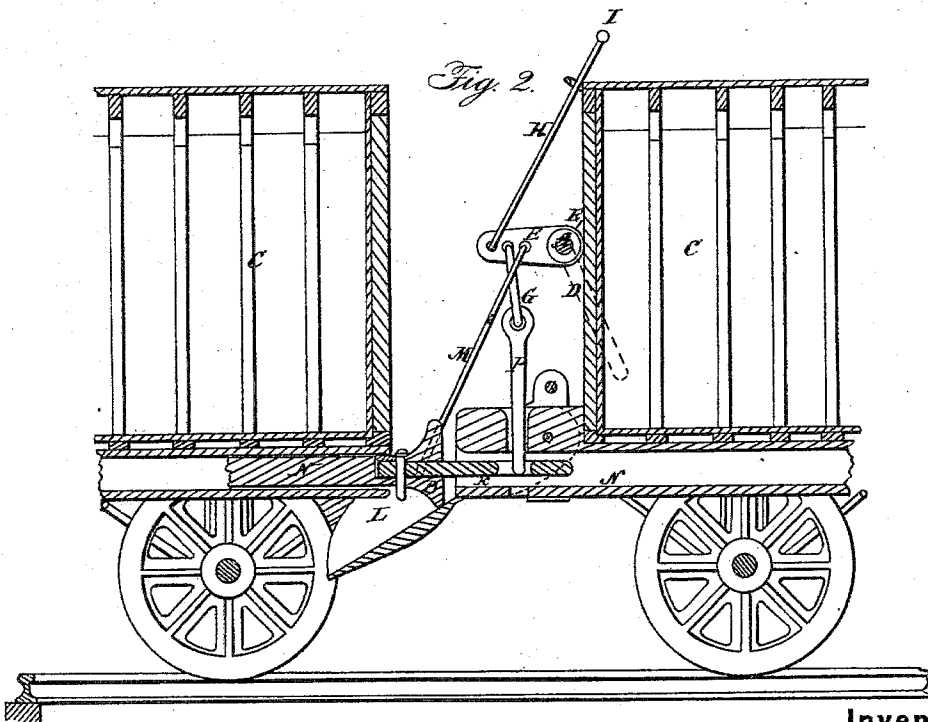
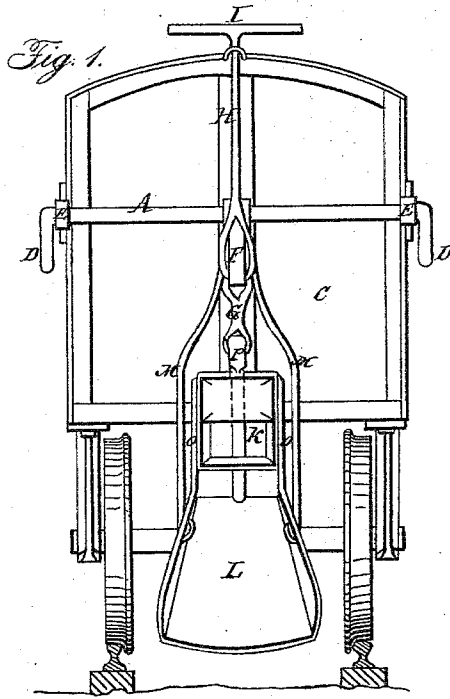


S. J. WALLACE.

Car Coupling.

No. 59,101.

Patented Oct. 23, 1866.



Witnesses:

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UNITED STATES PATENT OFFICE.

SAMUEL J. WALLACE, OF CARTHAGE, ILLINOIS.

IMPROVED CAR-COUPLING.

Specification forming part of Letters Patent No. 59,101, dated October 23, 1866; antedated October 13, 1866.

To all whom it may concern:

Be it known that I, SAMUEL JACOB WALLACE, of Carthage, in the county of Hancock and State of Illinois, have invented a new and useful Improvement relating to Car-Couplings; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, in which—

Figure 1 is a front view, showing the end of a car with my improvement attached; Fig. 2 showing the relative position of the several parts when the cars are coupled.

Similar letters refer to similar parts.

A is the rock-shaft at the end of car. B is the bumper-head on draw-bar N. C is the car. D D are the arms on the end of shaft A. E E are the parts attaching shaft A to the car C. F is the lifting and dropping arm on shaft A to operate the coupling parts. G is the connection from arm F to the coupling-pin P. H is the rod or connection from arm F to the top of car. I is handle on rod H. K is the coupling-entrance in draw-bar N. L is the part to lift or guide the link or coupling into entrance K. M M are the connections from part L to arm F. N is the draw-bar. O is the part attaching the part L to draw-bar N, and P is the coupling-pin.

This invention has for its object the making and improvement of means relating to car-couplings, and the connecting and disconnecting thereof without the danger and inconvenience of going between the cars, to be readily made, applied, and used, to be substantial and convenient, and to be adapted to the common couplings in use, or otherwise; and consists, principally, in, first, a rock-shaft across the end of car, with arms at the ends to be operated by, and with an arm in the center to lift or drop the coupling-pin and the link or coupling guide or lifter; second, a rod or connection from top of the car to the center arm to operate it and the couplings; third, a guide or lifter raising to guide or lift the link or coupling into place, to drop or draw back out of the way, and that the bumper of the meeting car can strike or move to cause the coupling-pin to drop to secure the connection and make self-coupling; fourth, a bumper-

head extending beyond part of the rim of the coupling-entrance, where the lifter or guide plays, in combination with a moving link or coupling guide or lifter; fifth, attaching the link or coupling guide or lifter, or part or parts to assist in the coupling, to the ordinary draw-bar or other part by a part clasp or attaching, substantially without material change of the parts already in use or equivalent, which form important improvements.

To enable others skilled in the art to make and use my invention, I will describe its construction and operation.

Figs. 1 and 2 show the shaft A at the end of car C and the arms D D at the ends thereof, made by bending an iron rod at the ends. This shaft A is attached by the pieces E E at the sides of the car. The pieces E E have holes, through which the shaft A passes, and are screwed to the sides of the car in a suitable position, which may be varied. This shaft A can be turned or rocked by means of these arms D D from the outside at either side of the car, and this shaft A can be made to extend from only one side to the center of car. Near the center of the end of the car, and in a suitable relation to the couplings of the car, an arm, F, is made on shaft A, so as to be raised and lowered by the rocking or turning of shaft A. This arm F is joined by the connection G to the pin or part P for securing the couplings, so as to lift or drop it therefor by the rocking of shaft A, operated from the outside, as described above, thereby connecting or disconnecting the couplings from a position out of danger, or at the side of the cars, without going between them, and forming a means therefor, as described. From above the top of the car a rod or connection, H, reaches down from the handle I to this arm F, enabling arm F to be raised or lowered by drawing up or pushing down the rod H from the top of the car, and for the same purpose as before indicated, and forming thereby a means therefor, and also forming altogether a combination of means on one car to connect or disconnect the couplings or operate parts therefor from the top of car, or from one or both sides. This rod H is held and guided properly for its purpose by arm F.

Figs. 1 and 2 show the part L, which is of

such a form, and is hung and pivoted in such a position and relation, that it will lift or guide the link or coupling into the coupling-entrance K for coupling, and is attached by the connections M M to the arm F, so as to operate and be operated, and raised and lowered, or drawn back, in the same manner and at the same time as the coupling-pin P is operated, as herein indicated. The operation being to raise, to lift or guide the link or coupling into entrance K for connection when the pin P is raised, and when the bumper-head of the meeting car strikes or presses against the part L, or the shaft A is rocked properly, or rod H is thrust downward to lower arm F, the part L will drop or draw back below by turning on its pivot so as to be out of the way, and the coupling-pin will at the same time be lowered, so as to secure the link or coupling in the entrance K in draw-bar, thereby being self-coupling if caused by the meeting car, or otherwise the whole operated like the coupling-pin, as stated herein.

Figs. 1 and 2 show the bumper-head B formed at the top of the end of the draw-bar N and above the coupling-entrance K, and extending beyond the lower parts of the rim of the coupling-entrance K, over which the part L plays to lift or guide the link or coupling into entrance K. Similar arrangements have been made before, but not with the combination of a part moving to lift or guide the link or coupling which this forms, and is formed to suit.

Figs. 1 and 2 also show the part O, by which the attached part L to lift or guide the link or coupling, or part or parts to assist the coupling, is attached to the draw-bar N, or part of the car apparatus without substantially a material change of the ordinary parts in use, or otherwise. This part O consists of a part to clasp or encircle the draw-bar N, and is composed of a suitable band or part of iron, with the proper parts attached or pivoted thereto; and the ends of this are fastened together, so as to retain it in the proper relation for the purpose for which it and they are designed, as herein stated. In making new parts it would be better and more simple to form them so that the proper parts can be properly attached directly thereto, the use of this, as shown, being to enable a ready attachment in the absence thereof.

The operation of this invention is this: The operation of the several parts as hereinbefore indicated, and of the whole together and severally, is as follows: The operator, being on the ground at the side of the end of the car, and wishing to couple it with an approaching car, having a link or coupling projecting toward the coupling-entrance K of car C, and the apparatus being in the position as shown in Fig. 1; the operator will move the arm D outward from the car, or properly, for the purpose as before herein indicated. This will turn or rock shaft A and raise or lift arm F; or if the operator is on the top of the car, he can draw up the rod H, which will produce the same effect. The lifting of arm F will draw up the coupling-pin P, so as to allow the link or coupling to enter the coupling-entrance K for connecting the cars, and will raise the part L, so as to lift or guide the end of the link or coupling to enter the entrance K, the apparatus being thus in the position as shown in Fig. 2. When the link or coupling has entered the entrance K into position to be secured by the pin P, the head of the meeting bumper may strike or move the part L, or some part in a similar manner, and bear it down and back out of the way, and thereby draw arm F and the pin P down and finish the connection of the coupling; or the operator can reverse the operation first stated, and produce the same effect of complete coupling, the apparatus being now again in the position shown in Fig. 1.

To uncouple, the operator makes the first operation stated above as to prepare for coupling. This lifts the coupling-pin P, as described, and disconnects the coupling, leaving the link or coupling free to be withdrawn, the operator being therefor either on the ground or on top of the car, as stated before.

What I claim and desire to secure is—

1. The arrangement at the end of the car of the horizontal shaft A, arm F, and link G, operating the coupling-pin P, substantially as described.
2. In combination with the above, the rising and falling coupling-guide L, operating as described.

SAMUEL JACOB WALLACE.

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